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| 10/529,886 | 04/01/2005 | Yoshinori Endo | 029267.56102US | 7725 |
| 23911 | 7590 | 12/06/2006 | EXAMINER | |
| CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300 | | | LEE, BENJAMIN C | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2612 | |

DATE MAILED: 12/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/529,886

Applicant(s)

ENDO ET AL.

Examiner

Benjamin C. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☒ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/1/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Status

1. Claims 1-20 are pending.

Claim Objections

2. Claim 10 is objected to because of the following informalities: In claim 10, line 4, "potion" should have spelled --portion--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-2, 5, 8-9, 13-17 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki et al. (US 6,320,518).

1) Regarding claim 1:

Saeki et al. discloses a map data transmission method (Figs. 2a-2b, 3a-3b and 6; col. 14, "embodiment 3"; col. 17, "embodiment 6"; col. 22, "embodiment 8") comprising: determining a recommended route (col. 22, lines 44-67) extending from a current position to a destination based upon map data that include road shape information indicating shapes of roads and road connection information indicating conditions with which the roads connect with one another (Figs. 7, 9-11, 15-17 depicting roads having shapes and connections recreated using received information); extracting map data over a slicing range set within a predetermined distance from the determined recommended route from the map data (col. 22, lines 62-67; col.

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24, lines 8-15); making a decision as to whether or not the road connection information is to be eliminated from the extracted map data (Fig. 6; col. 14, lines 13-65; col. 23, lines 24-30 in which roads eliminated include both road shape and road connection information); and transmitting map data obtained by eliminating the road connection information from the extracted map data if results of the decision indicate that the road connection information is to be eliminated (col. 14, lines 13-65; col. 23, lines 24-30).

2) Claim 2 (depends on claim 1): wherein geographical conditions are set for the map data; and the decision as to whether or not the road connection information is to be eliminated from the extracted map data is made by deciding whether or not the map data satisfy the geographical conditions having been set (Fig. 6 and col. 23, lines 24-30 wherein the type of roads and their distance to the route/present position constitute the claimed geographical conditions).

3) Claim 5 (depends on claim 1): wherein if the extracted map data include road data related to a road which does not connect with the recommended route, a decision is made to eliminate the road connection information corresponding to the road data (Fig. 3a, item "(3)").

4) Regarding claim 8:

Saeki et al. discloses a map data transmission method (Figs. 2a-2b, 3a-3b and 6; col. 14, "embodiment 3"; col. 17, "embodiment 6"; col. 22, "embodiment 8") comprising: determining a recommended route (col. 22, lines 44-67) extending from a current position to a destination based upon map data that include road shape information indicating shapes of roads and road connection information indicating conditions with which the roads connect with one another (Figs. 7, 9-11, 15-17 depicting roads having shapes and connections recreated using

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received information); extracting map data over a slicing range set within a predetermined distance from the determined recommended route from the map data (col. 22, lines 62-67; col. 24, lines 8-15); making a decision as to whether or not part of the road shape information is to be eliminated from the extracted map data (Fig. 6; col. 14, lines 13-65; col. 23, lines 24-30 in which roads eliminated include both road shape and road connection information); and transmitting map data obtained by eliminating part of the road shape information from the extracted map data if results of the decision indicate that part of the road shape information is to be eliminated (col. 14, lines 13-65; col. 23, lines 24-30).

5) Claim 9 (depends on claim 8): wherein if the extracted map data include road data related to a road which does not connect with the recommended route, a decision is made to eliminate part of the road shape information corresponding to the road data (Fig. 3a, item "(3)").

6) Claim 13 (depends on claim 1): claimed information distribution apparatus (Fig. 1).

7) Claim 14: claimed information terminal at which a map is displayed by using map data transmitted from an information distribution apparatus according to claim 13, comprising: a reception device that receives the map data (reception device inherently corresponding to transmitting unit 15 of Fig. 1); and display device that displays map data corresponding to the recommended route and map data contained within a specific distance from the recommended route based upon the received map data (Figs. 10-11).

8) Regarding claim 15, Saiki et al. discloses a map data transmission method comprising: determining a recommended route extending from a current position to a destination based upon map data that include road map data, which contain road shape information indicating shapes of roads and road connection information indicating condition with which the roads connect with

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one another, and facility data; extracting road map data over a slicing range set within a predetermined distance from the determined recommended route and also extracting facility data of a facility satisfying a specific requirement from facility data in an area beyond the slicing range based upon the map data; and transmitting, at least, the road map data extracted over the slicing range, the facility data extracted beyond the slicing range and map data corresponding to a road connecting with the facility (as considered in claim 1, plus Fig. 7).

9) Claim 16 (depends on claim 15): wherein the road connecting with the facility is an access road connecting the recommended route with the facility and also a return road connecting the facility with the recommended route (Fig. 7).

10) Claim 17 (depends on claim 15): wherein the facility data of a facility satisfying the specific requirement are data related to a specific type of facility that a user is likely to wish to use while traveling on the recommended route at a specific estimated time point (col. 18, lines 1-53 and Fig. 7).

11) Claim 19: claimed information terminal at which a map is displayed by using map data transmitted by adopting a map data transmission method according to claim 15, comprising: a reception device that receives the map data (reception device inherently corresponding to transmitting unit 15 of Fig. 1); and display device that displays road map data within a slicing range containing the recommended route and ranging within a predetermined distance from the recommended route and a facility mark corresponding to extracted facility data based upon the received map data (Figs. 10-11).

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12) Regarding claim 20, Saeki et al. met all of the claimed subject matter, including the claimed information distribution apparatus that executes a map data transmission method according to claim 8 (Fig. 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6-7 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al.

1) Regarding claim 6, Saeki et al. met all of the claimed subject matter as in claim 1, except: the claimed wherein a distance from the current position to the destination on the determined recommended route is calculated; total data size of the extracted map data is estimated based upon the calculated distance; and a decision is made to eliminate the road connection information if the estimated total data size is greater than a predetermined value.

However, Saeki et al. does teach to determination of a recommended route from the current position to the destination, and a total data size of the extracted map data for the route (13 of Fig. 1), and a decision is made to eliminate road data including road shape and road connection information if the estimated data size is greater than a predetermined value that is based on the performance capability of the overall system (Abstract; col. 12, lines 44-52 and Fig.

6). It would have been obvious to one of ordinary skill in the art at the time of the claimed invention that the determination of a total data size of the extracted map data for the

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recommended route in a system such as taught by Saeki et al. is dependent or proportional to the distance between the current position to the destination on the determined recommended route, and therefore the total data size of the extracted map data may be estimated based upon the calculated distance as a specific way of determining the total data size.

2) Regarding claim 7, Saeki et al. met all of the claimed subject matter as in claim 1, except: wherein information indicating that the road data including road shape and road connection information has been eliminated is attached to the transmitted map data.

However, since the system of Saeki et al. allows user request inputs to alter the operation of the system including information being extracted and transmitted to the vehicle (7 in Fig. 1), it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to attach to the transmitted data information indicating that the road data (road shape and connection information) has been eliminated, so that the user is made aware of such elimination in order for the user to properly make decisions on such requests.

3) Regarding claim 11, Saeki et al. met all of the claimed subject matter as in claim 8, plus the consideration of claim 6 above.

4) Regarding claim 12, Saeki et al. met all of the claimed subject matter as in claim 8, plus the consideration of claim 7 above.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Tada et al. (US pat. #6,594,580).

1) Regarding claim 3, Saeki et al. met all of the claimed subject matter as in claim 2, except: the claimed wherein: the geographical conditions include an urban area; and a decision is

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made to eliminate the road connection information if the extracted map data are not corresponding to the urban area.

Saeki et al. teaches a system to ensure that relevant route guidance information is efficiently selected for transmission to the vehicle that is within the capacity/capability of the transmission and display parameters. In the same art of navigation route guidance, Tada et al. teaches that limiting road connection information when in limited access roads such as expressways/highways (i.e. when not in urban area) contributes to reducing the time and cost required for sending and receiving route guidance information (col. 11, line 54 to col. 12, line 14). In view of the teachings by Saeki et al. and Tada et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to eliminate road connection information if the extracted map data are not corresponding to the urban area such as taught by Tada et al. in a route guidance information transmission/reception system such as taught by Saeki et al. to reduce the time and cost required for sending and receiving route guidance information.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Bullock et al. (US pat. #6,691,028).

1) Regarding claim 10, Saeki et al. met all of the claimed subject matter as in claim 8, except: wherein a decision is made to eliminate part of the road shape information included in map data except for map data corresponding to a portion of recommended route which is located on an approaching side to a guidance point on the determined recommended route and within a predetermined distance from the guidance point.

Saeki et al. teaches eliminating road data in the transmission of data to a vehicle for navigation guidance so that the data amount is within predetermined limits. In the same art, Bullock et al. teaches a similar system to minimize data transmitted by selecting crucial data (i.e. data not to be eliminated) for transmission including map data corresponding to a portion of recommended route which is located on an approaching side to a guidance point on the determined recommended route and within a predetermined distance from the guidance point (Abstract and Fig. 3). In view of the teachings by Saeki et al. and Bullock et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to exclude the elimination of road data including road shape data in Saeki et al. using a specific exception criteria of map data corresponding to a portion of recommended route which is located on an approaching side to a guidance point on the determined recommended route and within a predetermined distance from the guidance point such as taught by Bullock et al. so that such map data crucial for navigation is retained for navigation guidance.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saeki et al. in view of Hirota et al. (US pat. #5,568,390).

1) Regarding claim 18, Saeki et al. met all of the claimed subject matter as in claim 15, except: the claimed wherein the specific requirement satisfied by the facility data is an estimated traveling distance, an estimated time point or an estimated geographical position at which a remaining fuel quantity becomes equal to or smaller than a predetermined value while traveling on the recommended route and the facility data extracted when the requirement is satisfied relate to a refueling facility.

While Saeki et al. teaches allowing a user to manually request refueling facility information that is extracted when satisfying predetermined requirements, Hirota et al. teaches a more automated feature in which refueling facility near the route is searched and displayed to the user when an estimated traveling distance, an estimated time point or an estimated geographical position at which a remaining fuel quantity becomes equal to or smaller than a predetermined value while traveling on the recommended route (Fig. 12 and related disclosure).

In view of the teachings by Saeki et al. and Hirota et al., it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to include the more automated refueling facility extraction feature such as taught by Hirota et al. in a navigation guidance system such as taught by Saeki et al. to provide increased convenience and ease of operation for the user.

Allowable Subject Matter

10. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5790973, 6559865, 20020165663, 20010027376: Similar navigation systems.

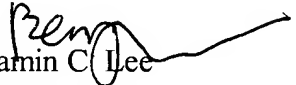
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin C. Lee whose telephone number is (571) 272-2963.

The examiner can normally be reached on Mon -Thu 11:00Am-7:30Pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Benjamin C. Lee
Primary Examiner
Art Unit 2612

B.L.